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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,711	08/27/2001	Satoshi Mizutani	2309/01753	5768

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EXAMINER

TORRES VELAZQUEZ, NORCA LIZ

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 04/10/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/940,711

Applicant(s)

MIZUTANI ET AL.

Examiner

Norca L. Torres-Velazquez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over FAHRENKRUG (US 4,891,258) in view of MURAKAMI et al. (US 5,268,213).

3. FAHRENKRUG discloses a stretchable composite that comprises a liquid-pervious layer, liquid-impervious layer, an absorbent layer, and a stretchable layer. (Abstract) Figure 1 illustrates composite 2 with the layers separated and the stretchable or elastomeric layer 6 in its relaxed, unstretched condition. In the manufacture of composite 2, elastomeric layer 6 is stretched to a desired elongation, and then liner 4, elastomeric layer 6, absorbent assembly 8 and cover 10 are bonded together. After the bonding, composite 2 is relaxed so that elastomeric layer 6 will recover from its stretched state. In doing so, liner 4, absorbent medium 8 and outer cover 10 are gathered, as illustrate in Figure 2, to form a plurality of rugosities 14 (loop portions), and a plurality of air pockets 9 on either side of elastomeric layer 6 within or inside composite 2. (Column 3, lines 20-32) The reference further teaches that the liquid permeable bodyside liner 4 can be a nonwoven web or sheet of polyolefin fibers, such as polypropylene, polyester, polyethylene, Rayon, Chisso and the like. Liner 4 can also be a nonwoven web of synthetic or natural fibers or a blend thereof, a plastic film with perforations or an expanded plastic webbing

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material or a scrim material. Preferably, liner 4 is spunbonded polyethylene or spunbonded polypropylene. (Column 4, lines 14-21)

A wide variety of materials can be employed as elastomeric layer 6 such as webs of elastic films, self-adhering elastomeric materials and extrudable elastic films that shrink and become elastic when cooled. (Column 4, lines 33-43) Elastomeric layer 6 is elongatable or stretchable from about 10% to about 800% of its relaxed length, and has good recovery such as at least about 10%. Elastomeric layer 6 also includes apertures 12 that allow rapid fluid passage or transfer therethrough in the direction toward absorbent medium 8 and eliminates or minimizes liquid flow in the reverse direction. Generally, apertures 12 are provided in any manner resulting in the desired fluid transfer properties or rates. (Column 5, lines 9-17)

The reference further teaches the use of pattern roll with projections as a method of bonding the layers together thermally, and also teaches the use of ultrasonic bonding and adhesive bonding. (Column 8, lines 54-61)

The FAHRENKRUG disclosure above anticipates the limitations of an absorbent article comprising a liquid permeable surface layer, a backing sheet and absorbent layer. It further anticipates a surface layer with a porous film having a plurality of through holes and fibrous layer disposed on the liquid-receiving face of the porous film. The fibrous layer and the film are bonded (fixed), by thermal bonding. With regards to claim 9, it is noted that the FAHRENKRUG reference teaches that the liner layer is preferably a spunbonded fabric, which inherently is produced by continuous filaments.

However, FAHRENKRUG does not disclose that the fibrous layer is a plurality of strips.

MURAKAMI et al. discloses a liquid-permeable topsheet made of thermoplastic resin for fluid absorbent articles. The liquid-permeable topsheet comprises a plurality of first direction ribs each comprising a top longitudinally extending in a first direction and opposite sides curved down-ward from the top and longitudinally extending also in the first direction. The reference also discloses a plurality of second direction ribs, each having a top longitudinally extending in a second direction, these first and second direction ribs crossing one another. MURAKAMI et al. further teaches liquid-permeable openings defined by the crossing of the ribs. (Column 1, lines 40-53; also refer to Figure 1) The openings as shown in Figure 1 are squared, therefore, the quadrangular shape limitation of claim 7 is taught by MURAKAMI et al.

With regards to claim 8, MURAKAMI et al. teaches that the respective components of the topsheet 1 are preferred to have dimensions so that the groove 10 has a width of 0.1 to 3 mm (pitch), as measured between the opposite lower edges 6A of each pair of adjacent first direction ribs 2, the first and second direction ribs 2, 3 have widths of 0.3 to 3 mm, the first direction ribs 2 has a height of 0.2 to 3mm. (Column 3, lines 1-5) MURAKAMI et al. is silent to the total length L along the outermost surface of the ribs 2 (loop portion). However, the reference discloses the height of the ribs, which is 0.2 to 3mm. Assuming that the total length L equals approximately 2 times the height of the loop, the MURAKAMI et al. reference teaches the ratio of the length L to the pitch P of the topsheet.

With regards to claim 11, MURAKAMI et al. teaches that the ribs (strips) are made of thermoplastic resin. FAHRENKRUG teaches that the liner can be a nonwoven or plastic film. Therefore, because these two materials were art-recognized equivalents at the time the invention

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was made, one of ordinary skill in the art would have found it obvious to substitute the plastic film or resin of the ribs (strips) for a nonwoven material.

Since both FAHRENKRUG and MURAKAMI et al. are from the same field of endeavor, liquid-permeable top sheets, the purpose disclosed by MURAKAMI et al. would have been recognized in the pertinent art of FAHRENKRUG.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the liquid pervious layer and provide it with ribs (strips) with the motivation of providing the sheet surface with direction-control diffusion as disclosed by MURAKAMI et al. (Column 1, lines 15-37).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

GALLAGHER (US 3,468,311) - discloses an improved absorbent pad comprising a pneumatic cellular cushion top layer, a liquid absorbent layer and a bottom liquid impervious layer. (Column 1, lines 11-13) The topmost layer comprises a pair of plastic sheets assembled to provide a plurality of air cell that are spaced from each other by partition zones or walls (fixing portions), formed by sealing the opposed surfaces of the plastic sheets together. (Column 2, lines 3-8) The reference further discloses a plurality of perforations 26 between the cells 22 and in the partition walls 24. The perforations are large enough to permit generally unrestricted flow of body fluids from the top surface of cushion layer into the absorbent layer. Further, the number of the perforations 26 is such that uncontrolled bladder emptying of a human may readily pass through the perforations 26 to the absorbent layer without flooding over the marginal side edges

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of the pas when the dimensions of the pad are approximately 24 by 36 inches. (Column 2, lines 9-21)

NISHINO (US 4,676,786)

CHEN et al. (US 5,990,377)

PALUMBO (US 4,780,352)

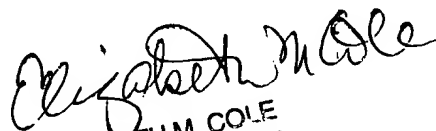
MIZUTANI et al. (US 6,362,391)

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 703-306-5714. The examiner can normally be reached on Monday-Thursday 8:30-3:00 pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

nlt
April 7, 2003


ELIZABETH M. COLE
PRIMARY EXAMINER